

(19)



JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: 2001111041 A

(43) Date of publication of application: 20.04.01

(51) Int. Cl

H01L 29/78

H01L 29/861

(21) Application number: 11237286

(71) Applicant: FUJI ELECTRIC CO LTD

(22) Date of filing: 24.08.99

(72) Inventor: MIYASAKA YASUSHI

(30) Priority: 12.11.98 JP 10321567
05.08.99 JP 11221861

FUJIHIRA TATSUHIKO

ONISHI YASUHIKO

UENO KATSUNORI

IWAMOTO SUSUMU

(54) **SUPER-JUNCTION SEMICONDUCTOR DEVICE
AND MANUFACTURING METHOD THEREOF**

COPYRIGHT: (C)2001,JPO

(57) Abstract:

PROBLEM TO BE SOLVED: To ease realization of mass production by clarifying the effect of parameters of a super-junction semiconductor device having a drift layer comprising parallel pn layers which depletes in OFF state while conducting current in ON state.

SOLUTION: The impurity amount in an (n) drift region 12a is in the range of 100-150% or of 110-150% of the impurity amount in a (p) partitioning region. Or, the impurity concentration in either of the (n) drift region 12a or the (p) partitioning region 12b is in the range of 92-108% of the impurity concentration in the other region. Besides, width of the one is in the range of 94-106% of the width of the other.

